

L 13771-65

ACCESSION NR: AP4049162

The thickness of the soap film depends on the boiling time; the optimum time was found to be 30 minutes, in which case a soap film approximately 20 Å thick was formed with the oleic acid. For this optimum thickness, the load required to cause seizure increased considerably, and the seizure itself was of a degenerate type. Of the other lubrication methods mentioned, only that employing an oleic acid-water emulsion on an oxidized aluminum surface was adequate. The presence of water was essential for the formation of aluminum hydroxide and soap. The findings were confirmed electronographically. Orig. art. has: 4 figures.

ASSOCIATION: Novocherkasskiy politekhnicheskii institut im. S. Ordzhonikidze (Novocherkassk Polytechnical Institute)

SUBMITTED: 00	ENCL: 00	SUB CODE: FP, IC
NO REF SOV: 002	OTHER: 000	ATD PRESS: 3132

Card 2/2

L 41829-65 FWT(m)/EPF(c)/ENA(d)/ENP(j)/T Fc-L/Pr-L RPL RM/DJ

ACCESSION NR: AF5011995

UR/0374/65/000/001/0128/0135

AUTHOR: Kut'kov, A. A. (Novocherkassk)

TITLE: Friction mechanism of polymers lubricated with surface-active agents

SOURCE: Mekhanika polimerov, no. 1, 1965, 128-135

TOPIC TAGS: polyamine compound, polymer physical chemistry, polyethylene plastic, polymer, friction, aerodynamic boundary layer

ABSTRACT: At the present time, one of the most important problems in mechanical engineering concerns the friction of plastic materials, since a general trend exists to replace metal with plastic in manufacturing friction parts. As polyamides, polyfluoroethylenes, and polyethylene are especially promising antifrictional polymer materials, three polymers were studied which represent their classes: polycaprolactam, polytetrafluoroethylene, and low-pressure polyethylene. The purpose of the study was to establish whether or not a boundary layer of polar surface-active compounds, such as higher fatty acids, is formed on the surface of these materials.

Card 1/4

L 41829-65

ACCESSION NR: AP5011995

It is well known that such boundary layers are formed on metal surfaces and that they considerably decrease the friction. In the case of metals, either a chemical interaction (i. e., formation of soaps with fatty acids) or a purely physical adsorption on active centers of the metal surface takes place.

In the case of polymers, available data disagree. In some instances, formation of a boundary layer was definitely observed; in other cases, it could not be detected. Therefore, an attempt was made to use a spectrophotometric method for solving this problem. The method consisted in determining the optical density of a 2% oleic acid solution in isooctane, both before and after immersion of a finely powdered polymer into the solution. A decrease in optical density indicated that some of the oleic acid was adsorbed on the polymer surface and that a boundary layer had actually formed. It was found that a boundary layer is formed on polycaprolactam; polytetrafluoroethylene and polyethylene built no boundary layer on their surfaces.

Card 2/4

L 41629-65

ACCESSION NR: AP5011995

Friction coefficients of pairs of the above mentioned polymers in all possible combinations, or in combination with steel, were determined with the addition of 2% oleic acid to D-1 neutral lubricating oil (after a stable friction had been attained without acid). With this process a definite decrease in friction was also observed in the nonpolar polytetrafluoroethylene and polyethylene, which had not formed a boundary layer under the static conditions in the previously mentioned solution. It was therefore assumed that the static electric charges, produced under the dynamic condition of friction, are responsible for adsorption of the surface-active compound on the surface of a nonpolar polymer. The experiment involving oleic acid adsorption from the solution was repeated under the dynamic conditions of shaking the system with subsequent rapid removal of the polymer, followed by determination of the optical density in the filtered solution. The results indicated that in this case, polytetrafluoroethylene and polyethylene also formed a boundary layer. Electrical charges were produced under dynamic conditions even if particles of the polymers were separated by a microlayer of oleic acid.

Card 3/4

L 41829-65

ACCESSION NR: AP5011995

On the basis of the results obtained, the author advances his hypothesis on the formation of boundary layers of surface-active agents on non-polar polymers through the formation of static charges on their surfaces by friction. Orig. art. has: 10 figures.

ASSOCIATION: none

SUBMITTED: 12Oct64

ENCL: 00

SUB CODE: MT, GC

NR REF SOV: 008

OTHER: 000

ATD PRESS: 3205-F

Card 4/4

L 52570-65 ENT(m)/EPF(c)/EMA(d)/T/EMP(t)/EMP(z)/EMP(b) Pr-4 MJM/JD/DJ

ACCESSION NR: AP5009900

UR/0065/65/000/004/0048/0052

AUTHOR: Kut'kov, A. A.

TITLE: A study of the lubricating capacity of certain types of higher fatty acids and vegetable oils

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 4, 1965, 48-52

TOPIC TAGS: aliphatic compound, vegetable oil, lubricant, lubricating oil, testing device, test method/ KT 2 friction machine, D 1 lubrication oil, 30KhGSA steel

ABSTRACT: The lubricating abilities of stearic, oleic, and ricinic acids, and of cotton, corn, and castor oils (containing these acids) were studied. Critical temperatures and loads were determined in the TK-2 friction machine by the procedure described by M. M. Khrushchov and R. M. Matveyevskiy (Novyy vid ispytaniya smazochnykh masel. Vestnik mashinostroyeniya, No. 1, 1954, 12), by R. M. Matveyevskiy (Temperaturnyy metod otsenki predel'noy smazochnoy sposobnosti mashinnykh masel. Izd. AN SSSR, 1956), and by G. V. Vinogradov (Novyye puti issledovaniya stazok, Vestnik AN SSSR, No. 1, 1961, 48). In all the experiments a 3% solution of acid or vegetable oil was added to the nonactive D-1 lubricant. Critical temperatures of D-1 activated by the acids are shown in Fig. 1 on the

Card 1/4

L 52570-66

ACCESSION NR: AP5009900

Enclosure. Those of cotton, corn and castor oils (added to D-1) equalled the critical temperatures of D-1 containing stearic, oleic, and ricinic acids. Similar diagrams for the critical load are shown in Fig. 2 on the Enclosure. The author designed a device and developed a procedure for determining the thicknesses of the lubricating films of lubricants under load. It was noted that the lubricating ability of ricinic acid and castor oil was much higher than that of the stearic and oleic acids and of cotton and corn oils. This is explained by the presence of chemically bound water (in the composition of ricinic acid and castor oil) which produced intensive oxidation of the metallic friction surfaces at high temperature and by the formation of oxide and hydroxide films. Moreover, water separating at the friction surfaces furthered a chemical reaction between the acid and the oxide or hydroxide film. Orig. art. has: 4 figures.

ASSOCIATION: Novocherkasskiy politekhnicheskii institut (Novocherkassk Politechnical Institute)

SUBMITTED: 00

ENCL: 02

SUB CODE: FP

NO REF SOV: 014

OTHER: 001

Card 2/4

L 52570-65

ACCESSION NR: AP5009900

ENCLOSURE: 01

0

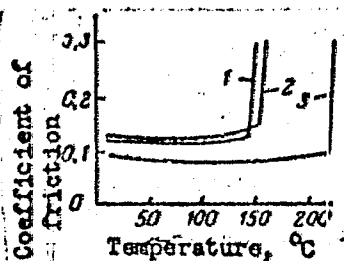


Fig. 1. Curves of critical temperatures of D-1 oil activated by acids:

1- stearic; 2- oleic; 3- ricinic

Card 3/4

L 5257C-65

ACCESSION NR: AP5009900

ENCLOSURE: 02

0

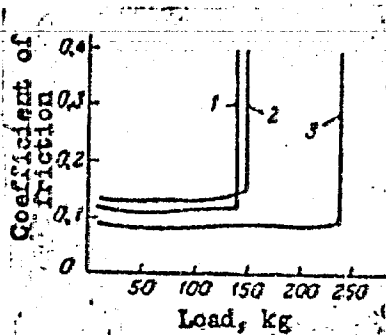


Fig. 2. Curves of critical loads of D-1 oil activated by acids:

1- stearic; 2- oleic; 3- ricinic

am
Card 4/4

L 15040-66 EWT(m)/EWP(w)/EWP(j)/T/EWP(e)/EWP(b)

JD/DJ/RM

ACC NR: AP6003946

SOURCE CODE: UR/0374/65/000/005/0101/0106

AUTHOR: Kut'kov, A. A. (Novocherkask)

ORG: none

TITLE: Service life of oriented fatty acid molecules on the friction surface of polymers and steel

SOURCE: Mekhanika polimerov, no. 5, 1965, 101-106

TOPIC TAGS: polymer, copolymer, steel lubrication, friction, metal friction

ABSTRACT: It was found that the efficiency (service life) of boundary lubrication layers on polymers is longer than that on steel. A hypothesis to explain the destruction of boundary lubrication layers on polymers and steel is suggested and the method for checking the hypothesis is described. Orig. art. has: 2 figures. [Based on author's abstract].

SUB CODE: 11/ SUBM DATE: 26Dec64/ ORIG REF: 005/

Cord 1/1

UDC: 678:661.893.668.1.546.621

ACC NR: AP6010828

SOURCE CODE: UR/0065/66/000/004/0027/0029

AUTHOR: Kut'kov, A. A.

ORG: Novocherkassk Polytechnic Institute (Novocherkasskiy politekhnicheskiy institut)

TITLE: Study of the lubricating quality of higher fatty acids

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 4, 1966, 27-29

TOPIC TAGS: oleic acid, ricinoleic acid, aluminum powder, soap, film lubrication,

friction
ABSTRACT: The limiting lubricating quality of higher fatty acids (oleic and ricinoleic) in a high vacuum was estimated by using the temperature method which is based on the fact that the instant of breakdown of the lubricating boundary layer is associated with an instantaneous increase of the coefficient of friction. Preliminary experiments aimed at determining the behavior of lubricating boundary layers in a vacuum showed that the latter adhere to the metal surface up to a certain given temperature beyond which they break down very rapidly. It was found that soaps of higher fatty acids are good lubricating media for friction pairs operating at low

Card 1/2

UDC: 661.732.9

L 39812-66
ACC NR: AF6010828

coefficients of friction in high vacuum. The performance of a paste consisting of oleic acid and aluminum powder is much lower than that of aluminum soaps of oleic acid. This confirms earlier conclusions that the effectiveness of fatty acids during operation in vacuum is low because of the absence of humidity and oxygen. The performance of a paste consisting of ricinoleic acid and aluminum powder is much better than that of the corresponding paste with oleic acid and close to that of soaps of ricinoleic acid. This shows that even in vacuum, ricinoleic acid is capable of forming highly effective hydroxide and soap films on the surfaces of the friction pair thanks to water that readily splits off. Orig. art. has: 4 figures.

SUB CODE: 1107/--- SUBM DATE: 00/ ORIG REF: 005/ OTH REF: 000

Card 2/2

SERIKOV, I.A., inzh.; KASHUBA, B.P., inzh.; OMIY, G.Ye., inzh.; ZELIKOVSKIY, L.M.,
inzh.; KUT'KOV, G.M., inzh.

New T-75 KhTZ tractor for work at increased speeds. Trakt. 1
sel'khoz mash. 30 no.6:5-9 Je '60. (MIRA 13:11)

1. Khar'kovskiy traktorny zavod.
(Tractors)

KASHUBA, B.P.; DONDE, V.N.; ZELIKOVSKIY, L.M.; KARMAZIN, E.I.;
KUT'KOV, G.M.; LINCHEVSKIY, V.V.; OGIIY, G.Ye.; SEPITYY,
V.T.; SKVORTSOV, V.F.; BANNIKOV, S.A., red.; PESTRYAKOV,
A.I., red.; BALLOD, A.I., tekhn. red.; GUREVICH, M.M.,
tekhn. red.

[The T-75 tractor; design and operation] Traktor T-75;
u. roistvo i ekspluatatsia. Moskva, Izd-vo sel'khoz. lit-
ry, zhurnalov i plakatov, 1961. 335 p. (MIRA 15:2)
(Tractors)

KUTKOV, I.A.

Some problems of organizing the antituberculosis campaign in
the rural medical sector. Zdrav.Tadzh. 6 no.2:39-42 Mr-Apr
'59. (MIRA 12:9)

1. Iz Leninabadskogo protivotuberkuleznogo dispansera.
(TAJIKISTAN--TUBERCULOSIS--PREVENTION)

KUTKOV, I.A.

Treatment of tuberculous empyema of the pleura. Zdrav. Tadzh. 8 no.6:
21-24 N-D '61. (MIRA 15:1)

1. Iz Leninabadskogo protivotuberkuleznogo dispansera (glavnyy vrach -
D.U.Ziyabayev).
(EMPYEMA) (PLEURA-TUBERCULOSIS)

KUTKOV, I.A.

Working capacity of persons who have completed their treatment of pulmonary tuberculosis by means of an artificial pneumothorax. Zdrav. Tadzh. 10 no.5:20-22 '63.

(MIRA 17:2)

1. Iz Leninabadskogo protivotuberkuleznogo dispansera (glavnyy vrach L.A. Iskandarova, nauchnyy rukovoditel' - dotsent Yu.D. Yatsozhinskiy).

KUTKOV, I.A.

Organizing operations for lung resections at Leninabad Province
Tuberculosis Dispensary. Zdrav. Tadzh. 8 no.6:24-28 N-D '61.

(MI: A 15:1)

1. Iz khirurgicheskogo otdeleniya Leninabadskogo oblastnogo
tuberkuleznogo dispansera (glavnyy vrach D.U.Ziyabayev).
(LENINABAD--LUNGS--SURGERY)

AUTHOR: Rutkov, I.N., Engineer.

104-2-24/38

TITLE: Improvements in fuel delivery. (Usovershtvovaniye eks-pluatatsii toplivopodachi)

PERIODICAL: "Elektricheskie Stantsii" (Power Stations), 1957,
Vol.28, No.2, pp. 83 - 84 (U.S.S.R.)

ABSTRACT: This brief practical note describes measures that were taken to improve operation of a covered fuel unloading bay equipped with scrapers. The changes relate to design of scraper buckets, to improving visibility of the bucket and similar improvements. Methods of transferring the coal to belt conveyors were improved so that dustiness was reduced.

There are two figures.

AVAILABLE:

Card 1/1

[illegible]

KUT'KOV, P.K.

Particular cases in the direction of the development of
press-forging machinery building. Kuz.-shtam proizv. 5
no.11:35 N '63. (MIRA 17:1)

L 18134-66 EWT(d)/EMP(v)/EMP(k)/EMP(h)/EMP(l)

ACC NR: AP6010362

SOURCE CODE: CZ/0032/65/015/003/0211/0219

AUTHOR: Pecha, J. (Prague); Petricek, Z. (Engineer; Prague); Kutkova, H. (Prague)

ORG: none

TITLE: Use of structural analysis for operational manufacturing plans

SOURCE: Strojirenstvi, v. 15, no. 3, 1965, 211-219

TOPIC TAGS: machine industry, matrix function, industrial production

ABSTRACT:

The method of structural analysis is discussed which can improve and facilitate short-term planning at large machine-industry plants which have production lines or series production. Essentially the method is based on the consistent use of matrix algebra with which it is possible to compute the parts and semifinished products needed in manufacturing, the output on the basis of market demands, and also the demands for raw materials and production capacities. The proposed method is being tested at selected machine-industry plants. This paper was presented by J. Saska, Engineer. Orig. art. has: 4 figures, 11 formulas, and 3 tables. [JPRS]

SUB CODE: 13, 05 / SUBM DATE: none / ORIG REF: 003

Card 1/1 vmb

UDC: 330.417: 338.455

KASSG/ITZ, J.; KOTIOVA, H.; SIPAL,Z.

Gold in protein fractions of the blood serum. Cas. lek. cesk.
103 no.19:520-522 8 My'64

1. Vyzkumny ustav chorob reumatickych v Praze (reditel: prof.
dr. F.Lemoch, DrSc.) a Katedra biochemie prirodovedecke fakulty
KU [Karlovy university] v Praze (vedouci: prof. dr. J. Kostir).

KOCKOVA-KRATOCHVILLOVA, Anna; KUTKOVA, Marta; PETROVA, Margita

Causes of interstitial plasma cell pneumonia in infants.
Cesk. epider. mikrob. imin. 5 no.3:156-160 June 56.

1. Katedra technickej mikrobiologie a biochemie chemickej
fakulty SVST v Bratislave Oddelenie glycidov a biochemie
chemickeho ustavu SAV v Bratislave.

(PNEUMONIA, INTERSTITIAL PLASMA CELL, in infant and child,
causes (Cz))

EXCERPTA MEDICA Sec 4 Vol 12/5 Med. Micro. May 59

1446. CONTRIBUTION TO THE PROBLEM OF THE CAUSE OF INTERSTITIAL PLASMACELLULAR PNEUMONIA IN INFANTS - K otázke pôvodu intersticiálnej plazmacelulárnej pneumónie dojčat. II. Vyfarbovanie bunkových štruktúr v bunkách kvasinkovitých mikroorganizmov - Kocková - Kratochvílová A., Kutková M. and Petrová M. Kat. Techn. Mikrobiol. a Biochem. Chem. Fak. SVST, Bratislava; Odd. Glycid. a Biochem. Chem. Úst., Bratislava - ČSL. EPIDEM. MIKROBIOL. IMUN. 1957, 6/5 (327-333) Graphs 1 Tables 2 illus. 4

Strains isolated from plasmacellular pneumonia were cultivated under conditions favourable for sporulation. Phase contrast microscopy revealed that sporulating cells first transform into large transparent cells with a brownish centre. Staining with methylene blue, eosin and haematoxylin revealed intracellular granules 1-12 in number. These granules are considered to be pre-spore formations.

Procházka - Prague

EXCERPTA MEDICA Sec 7 Vol.12/9 Pediatrics Sep 58

2585. THE CAUSE OF INTERSTITIAL PLASMA-CELL PNEUMONIA IN INFANTS -
Zur Frage des Erregers der interstitiellen plasmazellulären Pneumonie bei
Säuglingen - Kocková-Kratochvílová A., Kutková M. and
Petrová M. Biochem. Lab., Chem. Inst., Slovak Akad. der Wissensch.,
Bratislava - NATURWISSENSCHAFTEN 1957, 44/21 (565) Plus. 2

Various yeasts were isolated from the lungs of infants, 60% being *Candida albicans*.
By using nuclear stains and phasemicroscopy granular structures could be seen in
certain fungus cells, resembling the 'achter' cells (with height-granules) found in
sections of diseased organs.
Raubitschk - Jerusalem (IV, 7)

Country : CZECHOSLOVAKIA
Category : Plant Diseases. Diseases of Cultivated Plants. 0
Abs Jour : RZhBiol., No 6, 1959, No 25218
Author : Kockova-Kratochvilova, A.; Kutkova, M.;
Petrova, M.
Inst : -
Title : Species of the Genus Fusarium which Caused
Rot of the Sugar Beet Core in Slovakia in
1956.
Orig Pub : Ceska mykol., 1958, 12, No. 2, 83-94

Abstract : The species composition of the genus Fusarium
fungi is distributed unequally in the terri-
tory of the country. More often *F. culmorum*
(21.4 percent out of the total amount of the
registered species) is encountered, then *F. sam-*
bucinum and *F. solani* (18.5 percent); less often,
F. coeruleum (10 percent).

Card : 1/1

12

BETINA, Vladimir, inz., promovany biolog, CSc.; NEMEC, Pavel, prof. dr., promovany farmaceut; KUTKOVA, Marta, promovany biolog; BALAN, Jozef, inz., CSc.; KOVAC, Stefan, doc., dr., inz. CSc.

Citrinin isolation from *Penicillium notatum* Westling. Chem zvesti 18 no.2:128-139 '64.

1. Department of Technical Microbiology and Biochemistry, Slovak Higher School of Technology, Bratislava, Kollarovo namesti 2 (for Betina, Nemeec, Kutkova).
2. Biological Institute, Slovak Academy of Sciences, Department of Technical Microbiology, Bratislava, Dubravska cesta (for Balan).
3. Department of Organic Chemistry, Slovak Higher School of Technology, Bratislava, Kollarovo namesti 2 (for Kovac).
4. Corresponding member of the Slovak Academy of Sciences (for Nemeec).

NEMEC, P.; BAPATH, Z.; BETINA, V.; KUTKOVA, Marta

Antibiotic activity of fungi isolated from soil samples from
Indonesia. Folia microbiol. (Praha) 9 no.6:383-386 N '64.

1. Department of Technical Microbiology and Biochemistry, Faculty
of Chemistry, Slovak Technical College, Department of Microbiology,
Institute of Biology, Slovak Academy of Sciences, Bratislava.

ACC NR: AR7004037

SOURCE CODE: UR/0081/66/000/022/M013/M013

AUTHOR: Kutkova, Ye. S.

TITLE: Investigation of the glassy state regions in the $\text{La}_2\text{O}_3 - \text{B}_2\text{O}_3 - \text{P}_2\text{O}_5$ system

SOURCE: Ref. zh. Khimiya, Part II, Abs. 21492

REF SOURCE: Steklo. Tr. In-ta stekla, no. 1(129), 1966, 89-92

TOPIC TAGS: glass, lanthanum containing glass, boron containing glass, aluminum containing glass, glass formation region

ABSTRACT: The $\text{La}_2\text{O}_3 - \text{B}_2\text{O}_3 - \text{P}_2\text{O}_5$ system is investigated to determine the glassy state regions, the physico-chemical properties of glass in the system, and the dependence of these properties on the composition of the system. The results of the investigation are given. It has been found that with regard to the glassy state in borophosphate systems La is a better component for making glass than Al. [Trans-
lation of abstract] [KP]

SUB CODE: 11/

Card 1/1

DOLGOPOLYY, I.; KUTKOVETSKIY, Ya.; MESHCHERYAKOV, V.; SOSNIN, N.;
GAL'PERIN, V., red.; ROZENBERG, A., tekhn.red.

[Soviet Moldavia] Sovetskaya Moldaviya. Kishinev, Gos.izd-vo
Moldavii, 1957. 1 v. (MIRA 13:7)
(Moldavia)

KUTKOVY, A., mayor

How we teach military engineering. Voen. vest. 40 no.11:78-
79 N '61. (MIRA 14:11)
(Military field engineering--Study and teaching)

КУКОВСКИЙ, С. И.

1971 г. Y. 1971

The pearlite-austenite transition in alloyed steels. (S. I. Kukovskiy, *Zh. tekhn. fiz.*, 41, 1971, 1040-1044, 1044 figs. 1971, II, 5789) --The work of Golovin (cf. ibid., 45, 1719) on the influence of the rate of heating on the position of the dry point is discussed. Experiments on the direct heating of a low alloy steel (Mn 0.8%) have shown that 70 and 500 ppm Mn are reported. The results of these experiments, in view of other experimental results, support the view of Golovin and other investigators that the position of the dry point is independent of the rate of heating (within the above range). The accelerated addition of Mn tends to accelerate the transition process. (A. G. Morton)

5. 6.

27. 30

KUTKOVSKIY, S.I.

Residual voltages in induction hardening. [Izd.] LONITOMASH
no.33:118-134 '54. (MLRA 8:2)
(Induction heating) (Steel--hardening)

SOV/137-59-1-1509

Translation from: Referativnyy zhurnal. Metallurgiya. 1959, Nr 1, p 201 (USSR)

AUTHOR: Kutkovskiy, S. I.

TITLE: The Employment of Induction Heating in Testing for Thermal Fatigue
(Primeneniye induktsionnogo nagreva dlya ispytaniya na termiches-
kuyu ustalost)

PERIODICAL: V sb.: Prom. primeneniye tokov vysokoy chastoty Riga, 1957,
pp 101-105

ABSTRACT: A description of apparatus and techniques for thermal-fatigue testing of heat-resistant and refractory materials employed in the manufacture of components of reciprocating engines and turbojet engines. The tests were carried out on wedge-shaped specimens, the tips of which were rounded off to a radius of 0.2 mm. The testing conditions chosen corresponded to the actual operating conditions of turbine blades. The induction heating was carried out in such a manner that only a small semicircular zone with a radius of 7-8 mm near the tip of the specimen was heated. The cooling was accomplished by means of compressed air. The test consisted of a process of cyclic heating of specimens to a temperature of 840-850°C followed by cooling to a

Card 1/2

SOV/137-59-1-1509

The Employment of Induction Heating in Testing for Thermal Fatigue

temperature of 100-150°. The heating period required 9-10 seconds, the period of cooling 16-17 sec. The desired cycling was maintained automatically by means of two timer relays of the type EV 20/2. The number of cycles preliminary to the appearance of the first crack served as a criterion of the heat resistance of a material. An analogous method was employed in testing of turbine blades and welded connections in exhaust collectors of internal-combustion engines. In that instance, the causes of cracking were determined, and the nature of crack propagation was studied.

M. Sh.

Card 2/2

COV-135-58-10-14/19

AUTHOR: Kutkovskiy, S.I., Candidate of Technical Sciences

TITLE: Thermal Fatigue of Weld Joints in Exhaust Collectors
(Termicheskaya ustalost' svarnogo soyedineniya vykhlopnogo kollektora)

PERIODICAL: Svarochnoye proizvodstvo, 1958, Nr 10, p 38 (USSR)

ABSTRACT: Experimental tests on the cause of crack formation under the cover plate of fastening clamps in exhaust collectors were performed in order to determine efficient repair methods of such cracks. The tests were carried out according to a method developed by the author, consisting in repeated inductive heating of a defectless part and cooling by a compressed air stream. It was proved that the cracks were caused by thermal fatigue. Two methods are given: 1) the cutting of a hole, through which the electrode is introduced, and subsequent welding up of the hole; 2) welding up of the aperture in the cover plate and leaving the crack open. The second way is recommended, in view of the limited area and slow extension of cracks under the cover plate. There are 3 diagrams.

Card 1/1

1. Arc welding--Applications 2. Metals--Fatigue 3. Industrial plants--Maintenance

Ad. of Publishing House: V.A. Glazov, Tech. Ed.: I.P. Kuznetsov, Editorial Board: I.P. Bartin, Academician, O.V. Kurdyumov, Academician, B.V. Artyev, Corresponding Member, USSR Academy of Sciences (Resp. Ed.), I.A. Odintsov, Member and I.P. Zakharenko, Candidate of Technical Sciences.

Synopsis: This book is intended for metallurgical engineers, research workers in metallurgy, and may also be of interest to students of advanced courses in metallurgy.

NOTE: This book, consisting of a number of papers, deals with the properties of heat-treated metals and alloys. Each of the papers is devoted to the study of a certain property which affects the properties and behavior of metals. The studies are devoted to various elements such as Cr, Mo, and V on the heat-resisting properties of various alloys are studied. Corrosibility and workability of certain metals are related to the thermal conditions are the object of another study devoted to the problems of hydrogen embrittlement, diffusion and the deposition of ceramic coatings on metal surfaces by means of electrochromic membranes. One paper describes the structure and methods used for growing polycrystals of metals. Boron-based metals are critically studied and evaluated. Results are given of studies of intermetallic bonds and the behavior of atoms in metals. Tests of turbine and compressor blades described. Permalloy is mentioned. References accompany most of the articles.

139	Seleznev, V.I., and E.Y. Popov. Study of Certain Problems of the Temperature Dependence of the Plasticity of Steel From the Viewpoint of the Dislocation Theory	159
140	Grain, P.L., L.V. Petlinov, A.M. Zil'berman (Dnepropetrovsk), and S.B. Fedorov. Grain-Distribution in Chromium and Molybdenum	160
141	Prilepin-Lavrov, S.P., R.P. Sveshchik, R.S. Kaplan, N.I. Butko, and L.M. Melnikova. Investigation of the Properties of K-75 Steel	161
142	Prilepin-Lavrov, S.P., Z.I. Prilepin, and N.I. Shtromov. Cast Austenitic Steels for Service at Temperatures of 650-700°C	162
143	Prilepin-Lavrov, S.P., N.I. Prilepin, A.V. Prokhorov, A.I. Melnikov, S.A. Izrael'skiy, A.I. Chubakov, and V.I. Kuznetsov. Vysk. i tekhn. i spetsial. i. State-Resistant Alloy for Automobile and Stationary Gas Turbines	173
144	Kuznetsov, B.G. The Effect of Elements of Groups IV to VIII of the Periodic Table on the Properties of Phase Steel	179
145	Iskenderov, S.I. The Effect of Hardness and Grain Size on the Thermal Fatigue of CrNiTiAlTiB Steel	187
146	Portnyay, K.I., and S.V. Shashkov. Study of Boride-Phase Materials	192
147	Iskenderov, S.I. Study of Phase Composition of the Diffusion Layer	199
148	Apudov, B.A. On the Theory of Recovery and Complex Alloying of Steels	203
149	Iskenderov, S.I., E.N. Shishkova, V.K. Pilya, S.P. Sveshchik, M.V. Antipov, N.V. Kravtsov, and A.M. Melnikov. Calculability of Deformation Alloys	210
150	Iskenderov, S.I., and A.V. Prokhorov. Metallurgical Problems in Electroslag Refining of Heat-Resisting Austenitic Steels and High-Temperature-Grade Alloys	220
151	Iskenderov, S.I., and A.V. Prokhorov. Metallurgical Problems in Electroslag Refining of Heat-Resisting Austenitic Steels and High-Temperature-Grade Alloys. Part II. Study of the Mechanism of the Formation of Oxidation Products and of the Mechanism of the Formation of Oxidation Products in the Process of Electroslag Refining of Heat-Resisting Austenitic Steels and High-Temperature-Grade Alloys	228
152	Iskenderov, S.I. The Effect of Small Amounts of Alloying Elements on the Properties of Steels and Alloys	234
153	Iskenderov, S.I., and A.M. Melnikov. The Formation and Transformation of Oxidation Products	240
154	Portnyay, K.I. Fatigue of Hard-Steel Alloys	241
155	Portnyay, K.I., and A.M. Melnikov. Specifics of Oxidative work (per work of oxidation) of certain alloys	242
156	Iskenderov, S.I., and A.M. Melnikov. Mechanical Properties of Refractory Oxides	243
157	Iskenderov, S.I., and A.M. Melnikov. Mechanical Properties of Refractory Oxides. Part II. Study of the Mechanism of the Formation of Oxidation Products and of the Mechanism of the Formation of Oxidation Products in the Process of Electroslag Refining of Heat-Resisting Austenitic Steels and High-Temperature-Grade Alloys	244

S/145/60/000/009/015/017
D221/D304

AUTHOR: Kutkovskiy, S.I., Candidate of Technical Sciences

TITLE: Comparison of properties of electrode alloys for spot welding

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashino-stroyeniye, no. 9, 1960, 142-150

TEXT: The article is devoted to a comparative evaluation of the life of electrodes by investigating units made in cadmium copper mark MK, chromium bronze mark SpX-C.7 (BrKh-C.7), chromium zinc bronze mark 3B (EV), chromium-aluminum-magnesium bronze mark MQ-4 (MTs-4), and chromium-cadmium bronze mark MQ-5E (MTs-5B). All materials were tested in the form of rods obtained by hot pressing with subsequent cold drawing, and their chemical composition was tabulated. The author indicates the treatment and structure of alloys. There were no separate large chromium sec-retions. Measurements were made of their electrical conductivity, Brinell hardness at room temperature, endurance limit, relative elongation, temperature of recrystallization, one hour hot hardness and heat resistance. Card 1/3

S/145/60/000/009 0015/017
D221/D404

Comparison of properties of ...

tance. The electric resistance was checked with a bridge, type MOA-3 (MOD-3) giving an accuracy of 10%. The Brinell hardness was determined in accordance with method OCT (OST) 10241-40, the endurance limit and relative elongation as per GOST 10241-40. 42; the one-hour hot hardness by the method of GOST 10241-40. MAH (MAP). The comparison reveals that the mechanical properties of these alloys after treatment are quite high. However, the quantities of chromium as well as chromium zinc bronzes without full treatment are lower. Examination of bronzes Bz 1, Bz 2, Bz 3, Bz 4, Bz 5B and MK took place in the welder, type MH 15-9 (MTP 15-9) equipped with an electronic timer, type PS 1 (PVE 1). Hot rolled sand blasted steel plate, mark C-3 (St 3), 1.5 mm thick was welded. The wear of electrodes was measured after each 200 spots by measuring them into a 5 mm lead plate which was examined under a microscope. This was continued till the electrodes increased their contact surface by 20%. The welded spot was tested on the shear at the first and last weld of each 200 operations. The results indicate that there is no marked effect of electrode wear on the material in the shear resistance of weld. The results on testing electrodes made

Card 2/3

Comparison of properties of ...

S/146-60-000 009/015 0.1
D221 D304

in bronzes BrKh-0.7, MTs-4 and MTs-5B after thermo-mechanical treatment, as well as cadmium bronze MK are tabulated. The table also contains data on the life of chromium and chromium-plated bronzes in state of delivery tested in the same conditions by S.Ya. Libe. The above reveals that electrodes produced from hot-formed alloys which were subject to treatment, possess longer life than the untreated units. The best results were obtained with chromium-cadmium bronze MTs-5B subject to hardening, annealing and cold work hardening to a Brinell hardness H_B 130 to 140. There are 7 figures and 9 tables, and 27 references: 22 Soviet-bloc and 5 non-Soviet-bloc. The references to the English-language publications read as follows. W.J. Armstrong and H.D. Baer, *Electrode materials for resistance welding*, Welding and metal fabrication, no. 1, 1954, E.G. West, The welding of non-ferrous metals, London, 1951, R.H. Harrington, The metallurgical aspects of resistance welding electrodes, *Welding Journal*, no. 10, v. 17, 1938.

ASSOCIATION: Voronezhskiy vechernyy politekhnicheskoy institut
(Voronezh Evening Polytechnic Institute)

SUBMITTED: March 21, 1960
Card 3/3

83686

12300 only 2208

3/135/60/000/010/008/015
A006/A001

AUTHORS: Yershov, L. K., Chistyakov, Ye. N., Engineers, Kutkovskiy, S. I.,
Candidate of Technical Sciences

TITLE: Comparative Durability of Electrode Alloys in Spot Welding

PERIODICAL: Svarochnoye proizvodstvo, 1960, No. 10, pp. 24-26

TEXT: The manufacture of electrodes for spot welding by the method of cold heading is employed to eliminate waste of non ferrous metals occurring at the manufacture by mechanical treatment. When producing electrodes of heat treated chrome bronzes, the process of cold heading replaces hardfacing of the hardened alloy, necessary to raise the effect of subsequent aging. At the Moscow Automobile Plant imeni Likhachev tests were performed with cold headed Br.Kh-0.7 (Br.Kh-0.7) chrome bronze electrodes with different Cr content and ML-4 (MTs-4) alloy electrodes containing aluminum and magnesium. The chemical composition is given in Table 1. The electrodes are prepared by quenching the blank, cold heading, tempering, etching and machining of burrs. Cold heading was carried out on a 80-ton crank press by a method developed by L. K. Yershov and I. V. Demchenkov. Br.Kh-0.7 electrodes with different Cr content were quench-hardened

Card 1/3

83686

3/135/60/000/010/008/015
A006/A001

Comparative Durability of Electrode Alloys in Spot Welding

at 980°C and MTs-4 electrodes at 1,000°C. The electrodes were tempered for 5 hours at 450°C and air cooled. Hardness of Br.Kh-0.7 electrodes was HB 136 - 140, and 140 - 148 kg/mm² for MTs-4 electrodes. Comparative tests were made by welding hinges of hood sides on a ATA-40-8 spot welding machine. Br.Kh-0.7 electrodes with a medium Cr content which were not subjected to heat treatment were also tested. It was established that chrome bronze electrodes that were not heat-treated were less durable than heat-treated alloy electrodes. A Cr content of 0.44 - 0.72% in the latter did not considerably affect their durability. Heat treated MTs-4 electrodes proved to be less durable than Cr bronze electrodes. This result is not in agreement with data given by Zakharov (Ref. 1, 2) and Usherov-Marshak (Ref. 3) establishing a higher durability of MTs-4 alloy electrodes. Comparative tests of electrode alloys were also made (with the participation of L. M. Mirkina, engineer) in spot welding truck longers using Br.Kh-0.7, MTs-4 and МЦ-5Б (MTs-5B) electrodes. Br.Kh-0.7 and MTs-4 electrodes were water quenched at 1,000°C, cold deformed by 30 - 40% and tempered for 5 hours at 450°C. The hardness of Br.Kh-0.7 electrodes in treated state was HB 126 - 127 kg/mm²; that of MTs-4 electrodes was HB 137 - 143 kg/mm². Chrome-

Card 2/3

83686

S/135/60/000/010/008/015
AG06/A001

Comparative Durability of Electrode Alloys in Spot Welding

cadmium bronze MTs-5B electrodes were water quenched at 960°C , tempered at 450°C for 5 hours, and subjected to reduction by 20 - 30%, and their hardness was HB 121 - 129 kg/mm^2 . The tests proved that the durability of Br.Kh-0.7 and MTs-4 electrodes was practically the same. Durability of MTs-5B electrodes was by 25 - 50% higher. There are 2 figures 4 tables, and 3 Soviet references.

ASSOCIATION: ZIL (Yershov and Chistyakov)

Card 3/3

83682

1.2300 only 2208, also 2308

S/135/60/000/010/009/015
A006/A001

AUTHORS: Kutkovskiy, S. I. Candidate of Technical Sciences, Gorfunkel',
I. M., Engineer

TITLE: Comparative Tests of Electrode Alloys for Projection Welding of a
Cylinder With an Underframe

PERIODICAL: Svarochnoye proizvodstvo, 1960, No. 10, pp. 26-27

TEXT: The authors studied the comparative durability of a series of electrode alloys (Table 1) for projection welding of parts permitting the use of electrodes with a very small operational surface. The alloys were tested in different initial states. Composition and treatment of the alloys are given. Welding was performed on a 175 kvamp 300-PT-12 (300-RT-12) type machine under the following conditions: secondary voltage: 9.8 - 9.9 v; welding time 0.06 sec, number of welds: 30 per minute; compression force applied to electrodes 1,100 - 1,150 kg. A set of 3 parts consisting of a 08 steel underframe, a ring and a cylinder was welded. The durability of the electrodes was estimated by the following characteristics: 1) the deformation of the electrode tip (determined by measurement); 2) electrode oxidation (observed visually);

Card 1/3

83682

S/135/60/000/010/009/015
A006/A001

Comparative Tests of Electrode Alloys for Projection Welding of a Cylinder With an Underframe

3) frequency of sticking of the part to be welded to the electrode; 4) the degree of electrode chipping (observed visually). The electrode was used for 1 hour producing 1,500 welds. After this time it was replaced, since excessive current density and shunting of current were caused by its continuous use. After regrinding the electrode was reused until its length was reduced to 22-23 mm. Results of tests are given in Table 3. The data obtained show that highest durability was found in MU-5B (MTs-5B) chrome-cadmium bronze, treated by the technology used at the plant (quenching, tempering and hardfacing up to a hardness of HB = 120 - 125 kg/mm²). It is by 60 - 65% cheaper than chrome-beryllium bronze and may be also used for spot and roller welding. Of the remaining alloys chrome-beryllium bronze proved most durable. MTs-4 electrodes were less durable and showed higher oxidation and chipping. Two of six electrodes tested burnt out during the first minutes. Chrome-beryllium bronze, actually used at a number of plants, showed under the experimental conditions highest durability in non-hardfaced state, although slight chipping of the electrodes was observed. Best properties of the alloy are obtained after quenching, hardfacing and

Card 2/3

83682

S/135/60/000/010/009/015
A006/A001

Comparative Tests of Electrode Alloys for Projection Welding of a Cylinder With
an Underframe

tempering. At plants where the necessary forging equipment is not available,
it is recommended to treat the alloys only by quenching and tempering without
hardfacing. There are 2 figures and 3 tables.

X

Card 3/3

BUZOVSKIY, S.I.; ALEKSEYEV, A.A., publ.

[Electrodes of resistance welding machines] Elektrody
kontaktnykh elektrosvarochnykh mashin. Moskva, Ma-
shinostroyeniye, 1964. 110 p. (MIRA 12:1)

KUTKOVSKIY, S.I., kand. tekhn. nauk, dotsent

Geometrical classification of electrodes for resistance
spot welding. Izv. vyz. ucheb. zav.; mashinestr. no. 1:
171-176 '65. (MIRA 18:11)

KUTLAK, Erna; VASILE, Dumitru

Increased obligations, efficient measures. Constr. Buc 16
no. 73622 15 F'64.

1. Dela fabrica de produse ceramice Mureseni, Tg. Mures
(for Kutlak).

L 51315-65 EXP(k)/ENT(A)/EXP(h)/EXP(l)/EXP(v) PF-4

ACCESSION NR: AP5009788

UR/0292/65/000/004/0011/0014
681.142.67:621.316.925.001.3

AUTHOR: Girschberg, V. V. (Engineer); Kutler, N. P. (Engineer); Khodnev, V. V. (Engineer); Petrukhin, B. P. (Engineer); Domanitskiy, S. M. (Candidate of technical sciences); Prangishvili, I. V. (Candidate of technical sciences) 20
B

TITLE: Transistor logical and functional elements of the standardized ET series intended for industrial automatic systems 11

SOURCE: Elektrotehnika, no. 4, 1965, 11-14 36-

TOPIC TAGS: logical element, functional element, industrial automation / ET automatic element

ABSTRACT: Data on 18 Soviet-made NOR, OR, AND and MEMORY elements is given. The elements are designed to operate at $-40 \pm 50^\circ\text{C}$, humidity up to 80% at $+20^\circ\text{C}$, supply-voltage variation of $-15 \pm 10\%$. The intensity of failure of the principal 2 NOR ("ET-L01") element is 10^{-6} per hr which is much lower than the

Card 1/2

L 51315-65

ACCESSION NR: AP5009788

statistical intensity for relays. The life of the elements — 40000 hrs — is independent of the number of operations. The principal logical elements operate at a frequency up to 10 kc. Supply voltages, -12 or -25 v; bias voltage, +6 v; load voltage, 24 v dc. Signal levels, 0.2—0.8 v or 4 v dc. Orig. art. has: 10 figures and 3 tables.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: IE

NO REF SOV: 000

OTHER: 000

Card 2/2

L 23669-66

ACC NR: AP6015274

SOURCE CODE: UR/0292/65/000/004/0015/0018

AUTHOR: Biryukov, A. V. (Engineer); Kutler, N. P. (Engineer); Podaruyev, A. I. (Engineer)

57
B

ORG: none

TITLE: Transistorized protection and automation block of the hydro-unit and transformer of the Belomorskaya hydroelectric station

SOURCE: Elektrotehnika, no. 4, 1965, 15-18

TOPIC TAGS: hydroelectric power plant, automatic control, circuit design, transistorized circuit, electric transformer

ABSTRACT: A contactless transistorized sys a for the protection, automatic control, and signaling of hydro-units and transformers is currently being tested at the Belomorskaya Hydroelectric Station. The device consists of 1) a block for transformer protection; 2) a block for generator protection; 3) a block of automatic control and signaling; and 4) power supply. The article presents and explains the operation of logical structural diagrams of all the blocks without, however, giving any detailed engineering information about the actual circuitry. The only exception is the figure representing the circuit diagram of the relay-operated control of the power supply voltage. Tests (carried out in co-operation with engineers Yu. P. BUDYKHO and V. I. RYBAKOV) proved the correctness of the design and all elements operated according to plans. Orig. art. has: 7 figures. [JPRS]

SUB CODE: 10, 09 / SUBM DATE: none

Card 1/1

UDC: 621.316.925.38.322-82.001.3

TA 13/49T36

KUTLER, P. P.

USSR/Engineering
Economy
Cost Analysis

Jun 49

"The Nature of Expenditures in the Construction
of Hydroelectric Stations," P. P. Kutler, 3 pp

"Gidrotekh Stroi" No 6

Gives breakdown of construction costs for five
hydroelectric stations: Kama, Mingechaurskiy,
Verkhotur, Khroma, and Dzandzhikan. Gives more
detailed cost analysis for Kama and Mingechaurskiy
stations. States costs and amounts of cement,
wood, ferrous metals, brick, stone, lime, etc.

53/49T36

KUTLER, V. P.

"Some Questions on the Kinematics of the Plane-Parallel Motion of a Solid," by V. P. Kutler, Mekhanika, No 50, Oborongiz, Moscow, 1956, pp 300-312

This article presents a method of deriving formulas to be used in finding the acceleration of an instantaneous center of velocity of a plane figure as a point lying on the given figure and not on that describing the centroid. The author discusses the determination of the acceleration of an instantaneous center of rotation and the determination of the curvature center of a point trajectory during plane motion.

Sum 1274

24.4100

S/549/61/000/104/018/018
D237/D304

AUTHOR: Kutler, V.P., Assistant

TITLE: On a method of determining the point of acceleration in the plane-parallel motion of a rigid body

SOURCE: Moscow. Vyssheye tekhnicheskoye uchilishche. [Trudy], no. 104, 1961. Mekhanika, 176 - 181

TEXT: A point M of the plane figure is under the acceleration \bar{a}_M .

The author defines a reduced acceleration as a vector of magnitude a_M/ω^2 and direction \bar{a}_M where ω - angular velocity of the figure,

and proves the following theorem: The ends of reduced accelerations of two arbitrary points of the plane figure lie on the perpendicular to the line connecting those two points. The corollary extends the above theorem to any number of points on one straight line. Using the above theorem and corollary, the author gives a graphical method for determining the accelerations of points on a moving plane figure and illustrates it by a numerical example. There are 5 figures. /B

Card 1/1

KUTLESA, Dr. Ivan

"A Contribution to the Diagnostics of the Newcastle Disease." Dr. Ivan Kutlesa - a scientific collaborator & chief of the Vet. Inst. of Republic of Serbia & Montenegro in Banja Luka.

SOURCE: Vet., BROJ 2-9-19, p. 762, 1952

KUTLESA, Dr. Ivan

"Serological Investigations of Occupational Brucellosis in P. R. Bosnia - Herzegovina."

Dr. Ivan Kutlesa - director & scientific collaborator of Vet. Inst. at Banja Luka.

Dr. Josip Lukacevic - scientific collaborator & chief of Bacteriological Lab. Vet. Inst. of P. R. Bosnia - Herzegovina, Sarajevo.

SOURCE: Vet. SVEZAK 2, p. 250, 1953

KUTLIK, I.

KUTLIK, I. Notes on E. Cajankova's Zivot a kultura rozkovianskych Ciganov
(The Life and Culture of the Gypsies of Rozkovany); a book review
Vol. 4, no 6 1956 SLOVENSKY NARODNIS Praislava Czechoslovakia

SOURCE: East Europeans Accessions List (FEAL) Vol. 1 No. 4 April 1957

KUTLIK, I.

65th anniversary of prof. Dr. Václav Jedlicka. Cas. lek. česk. 97 no.17:
550-552 25 Apr 58.

(BIOGRAPHIES,

Jedlicka, Václav, biobibliogr. (Cz))

KUTLIK, I.

History of the development of pathological anatomy in Slovakia.
Bratisl. Lek. Listy 42 no.7:415-436 '62.

1. Z Ustavu patologickej anatomie Univerzity P.J. Safarika v Kosiciach,
prednosta doc. MUDr. I. Kutlik.
(PATHOLOGY) (HISTORY OF MEDICINE XX CENT)
(HISTORY OF MEDICINE CIC CENT)

TUGOV, I.I., kand.tekhn.nauk; KUTLINA, I.A.

Swelling of the carcass plies of automobile tire treads in
various hydrocarbons. Nauch.-issl. trudy VNIIPK no.13:43-49
162. (MIRA 18:1)

S/153/62/005/003/003/004
E195/E485

AUTHORS: Gridunov, I.T., Kutlina, L.A., Malyutina, M.F.

TITLE: Transparency optimum in vulcanized rubbers

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Khimiya i
khimicheskaya tekhnologiya, v.5, no.3, 1962, 480-483

TEXT: The effect of various types and amounts of fillers on the physicochemical properties and transparency of vulcanisates was studied. It was found that the heating time for which the best properties were obtained (curing optimum) does not coincide with that of the maximum transparency (transparency optimum), the latter requires a longer time. The curing optimum depends on the type of rubber, the filler, the accelerator action and varies between 5 and 30 minutes. The transparency optimum depends on the polymer type and to a lesser extent on the quantity of colloidal silicic acid in the mixture and the composition of the accelerator group; for those from natural rubber it was obtained with a curing time of 30 to 40 minutes, while divinylstyrene rubbers only needed 20 to 30 minutes. There are 3 tables.
Card 1/2

Transparency optimum ...

S/153/62/005/003/003,004
E195/E485

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy
tekhnologii im. M.V.Lomonosova
Kafedra tekhnologii pererabotki polimerov i
tekhnologii reziny (Moscow Institute of Fine
Chemical Technology imeni M.V.Lomonosov,
Department of Polymer Treatment Technology and
Rubber Technology)

SUBMITTED: February 14, 1961

Card 2/2

GRIDUNOV, I.T.; SHULYAK, Z.N.; KUTLINA, L.A.; MALYUTINA, M.F.

Use of domestic white carbon blacks in transparent rubbers. Izv.vys.
ucheb.zav.;khim.i khim.tekh. 6 no.4:652-658 '63. (MIRA 17:2)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. Lomonosova.
Kafedra pererabotki polimerov i tekhnologii reziny.

KUTLINSKIY, V.

In solving important problems... Prof.-tekh. obr. 20 no.1:10-11
Ja '63. (MIRA 16:2)

1. Inspektor otдела professional'no-tekhnicheskikh uchilishch Glavnogo
upravleniya professional'no-tekhnicheskogo obrazovaniya pri Sovete
Ministrov Azerbaydzhanskoy SSR.

(Building trades—Study and teaching)

KUTLİYEV, Yu. K.:

KUTLİYEV, Yu. K.: "Experimental study of the effects of streptomycin, sintomycin, and levomycetin on the biological properties of dysentery bacteria." Turkmen State Medical Inst imeni I. V. Stalin, Ashkhabad, 1956. (DISSERTATION For the Degree of Candidate in Medical Science.)

Co: Knizhnaya Letopis, No. 18, 1956

KUTLOVSKAYA, A.Ye., inzh.; BESSMERINAYA, G.D., inzh.

Using volatile inhibitors as anti-corrosives for metals. Za
indus.Riaz. no.2:53-54 D '61. (MIRA 16:10)

1. TSentral'naya zavodskaya laboratoriya Ryazanskogo stankostroitel'nogo
zavoda.

KUTLOV, Y. S.

Nurseries (Horticulture)

Nine hundred thousand mulberry seedlings to the hectare. Les 1 step;
No. 3, 1952.

Monthly List of Russian Accessions, Library of congress, July 1952.
Unclassified.

1. KUTLOYEV, YU. S.
2. USSR 600
- h. Series
7. Practice of leading silkgrowers in Odessa Province, Dest. sel'khoz, No. 12, 1952.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

1951, No. 3.

Poultry - Feeding and Feeding Stuffs

Let's set up supplementary feed reserves on poultry farms. 1951, No. 3, 1951.

Monthly List of Russian Acquisitions, Library of Congress, Jan. 1951. Vol.

KUTLUBAYEVA, A. I.

KUTLUBAYEVA, A. I.: "The fixation of antigens of typhoid and dysentery bacteria by the organs of people who have died from these infections." Kazan' State Medical Inst. Kazan', 1955. (Dissertation for the Degree of Candidate in Medical Science.)

Knizhnaya Letopis'
No 32, 1956. Moscow.

KUTLUBAEVA, K.I.

USSR Pharmacology. Pharmacognosy. Toxicology - Local Anesthetics. T-4

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 11709

Author : Kutlubayeva, K.I.

Inst :

Title : On the Effect of a Short Novocaine Penicillin Block
According to Vishnevski on the Formation of an Hyperergic
Inflammation.

Orig Pub : Materialy po bor'be so Zlokachestvennymi Opukholyami,
1954, No 4, 21-26

Abstract : The effect of a short novocaine-penicillin block with
Vishnevski's method upon the Schwartzman phenomenon in
rabbits, after intradermal injection of typhoid fever
culture with a subsequent introduction of a decisive
dose of filtrate intravenously was investigated after
24 hrs. The blocking was done once, after the introduc-
tion of the preparative dose, or twice after the prepa-
rative injection and before the decisive doses. The

Card 1/2

- 40 -

USSR/Pharmacology. Pharmacognosy. Toxicology - Local Anaesthetics. T-4

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 71709

The single block produced the suppression of development of the Schwartzman phenomenon in two out of 11 rabbits; in 4 animals the inflammatory reaction was more acute than in the control animals. The double blocking caused a complete or partial suppression of the Schwartzman phenomenon in the majority of tests. Thus, the local short blockage after Vishnevski's method suppresses the Schwartzman phenomenon. particularly if used before the introduction of the decisive dose.

Card 2/2

- 41 -

AID P - 3289

Subject : USSR/Mining
Card 1/1 Pub. 78 - 19/24
Author : Kutlugil'din, M. Kh.
Title : Experience in speedy erection of oil well drilling derricks
Periodical : Neft. khoz., v. 33, #9, 82-84, S 1955
Abstract : Great progress is reported in the Bashkir oil district in the production of existing wells and in the prospecting of new wells. Portable derricks and rigs have been used with great success. They are moved on special carriages and are speedily assembled.
Institution : None
Submitted : No date

SHCHUKIN, V. A.

SHCHUKIN, V. A. -- "Disturbance Equipment With Precision Receiver Selection of Equipment for Receivable Platforms in Cases of Direct Exposure and the Problem of Durability of 'Precision Devices'." In: 1. Apr. 8, 1980 on "Using Test Issue 1. 1. Stalin. (Disturbance Equipment in Cases of Durability in Direct Exposure).

For: Yegorova, G. A., January-December 1980.

KUTLUMURATOV, Dzhamurat; TSOY, B., red.

[Development of combinatorial methods in mathematics]
O razvitii kombinatornykh metodov matematiki. Nukus,
Karakalpakia, 1964. 114 p. (MIRA 18:5)

KUTLUNIN, V.A., kand.tekhn.nauk

Determining the load capacity of skip filling mechanisms. Ugol'
74 no.4:37-39 Ap '59. (MIRA 12:7)
(Mine hoisting) (Coal handling machinery)

BELYAYEV, V.S.; BORISENKO, L.D.; BORISENKO, E.V.; KORABLEV, A.A.;
KOLYSHKIN, O.M.; KUTLUNIN, V.A.; MALYAGIN, M.S.; SOKOLOV, A.I.;
CHUDAKOV, A.I.; ABRAMOV, V.I., otv.red.izd-vn; BOLDYREVA, Z.A.,
tekhn.red.

[Manual for the coal mine mechanic] Spravochnik mekhanika
ugol'noi shakhty. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po
gornomu delu, 1960. 612 p. (MIRA 13:12)
(Coal mining machinery)

SAGOMONYAN, A.Ya.; KUTLYAROV, V.S.

Approximate method for determining the mean diameter of a hole made in a barrier by a striker in a high velocity impact. Vest. Mosk. un. Ser. 1: Mat., mekh. 19 no.2:63-69 Mr-Apr '64.

(MIRA 17:3)

1. Kafedra gazovoy i volnovoy dinamiki Moskovskogo universiteta.

SOLOMATIN, G.G.; KUTLYYEV, Yu.M.

Using the sand-jet method for disintegration in the repair of wells. Nefteprom. delo no.4:16-20 '65. (MIRA 18:6)

1. Turkmen'skiy filial Vsesoyuznogo neftegazovogo nauchno-issledovatel'skogo instituta.

KUTMAN, B. L.

KUTMAN, B. L. Optimum Ball Charge for Ball-Type Mills (Optimal'nyaya Sharovaya
Zagruzka Barabannykh Mel'nits), pp. 6-10

The results of experimental research on the optimum steel-ball charge for the pulverizing-
coal mills are discussed. (Tables, graphs and formulae).

SO: ELEKTRICHESKIYE STANTSII, No. 12, Dec. 1952, Moscow (1614306)

KUTMAN, B.L., inshener.

Improving ball drum mills. Blek.sta. 25 no.8:54-55 Ag '54.
(Milling machinery) (MLBA 7:9)

Kutman, B. L.

AID P - 2062

Subject : USSR/Electricity

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Authors : Kutman, B. L. and Rozova, Ye. K., Engs.

Title : ~~Millage of Kizel coal in ball mills~~
Milling of Kizel coal in ball mills at various rotation speeds of the drum

Periodical: Elek. sta., 4, 14-19, Ap 1955

Abstract : The article describes tests made in 1953 at three power plants operated by Kizel coal and equipped with 3 different types of ball mills. These tests proved that the output increases if the RPM decreases, although equipment wears out faster. With mathematical equations the author explains the difference in production and output of ball mills varying according to the angular velocity and the capacity of the electric motor. The author recommends that in order to obtain a ball mill with a reduced RPM designs should be changed.

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Institution: None

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AUTHOR: Kutman, B.L., Engineer. 96-7-6/25
TITLE: Improving the efficiency of drum-type ball mills.
(Povysheniye ekonomichnosti sharovykh barabannykh
mel'nits.)
PERIODICAL: "Teploenergetika" (Thermal Power) 1957, Vol.4, No.7,
pp. 29 - 35 (U.S.S.R.)

ABSTRACT: During the investigation and operation of pulver-
ised fuel systems with drum-type ball mills it was found
possible to increase the efficiency considerably. Some
of the reasons for this are as follows: the low effici-
ency of operation of the balls in mills types 287/470
and 287/430 with the wavy armouring and speed ratio
provided by the manufacturers; the presence of a large
quantity of finished dust in the material returned
from the separator.

During 1953-56 studies were made at four power
stations of Molotovenergo on dust systems with ball
mills type 250/390, 287/470, 287/430 and 287/510 at
different speeds. Mill type 287/470 was studied in
the greatest detail over a wide range of speed on single
fan systems. The waves in the armouring are 35 mm high

Card 1/8

Improving the efficiency of drum-type ball mills.
(Cont.)

86-7-6/25

and 246 mm pitch. The ball load is 20-21 tons. The speed was reduced by changing the motors or the gearing. The mode of operation of the balls in the drum at various speeds was examined by an irradiation method. The main characteristics of a mill type 287/470 at speeds of 21.8 and 16.9 r.p.m. are given in Fig. 2. Irradiation of the drum working without fuel showed that at 16.9 r.p.m. more than half of the balls turned in a layer without rising up the wall to a sufficient height and falling. At this speed it was difficult to remove finished dust from the balls which led to over-milling of the fuel. Theoretical trajectories of the balls in the mills were constructed for speeds of 17 and 21.6 r.p.m. These showed that at 17 r.p.m. the load of balls is concentrated on one side of the drum. This volume of the drum also contains most of the milled fuel. The drum volume that is free from balls and fuel is of reduced resistance and so most of the air passes through it, which still further impairs removal of dust from the drum. When the speed of this

Card 2/8

Improving the efficiency of drum-type ball mills.
(Cont.)

96-7-6/25

mill is reduced from 21.8 to 16.9 r.p.m. the output decreases sharply and the specific power consumption for milling increases. The main characteristics of another mill type 287/470 at speeds of 22 and 19.2 r.p.m. are shown in Fig. 3. Irradiation showed that at 19.2 r.p.m. most of the balls were raised round the circumference to a certain height, then broke away and fell freely till they met the fuel coming from the inlet. At the instant of entering the drum the fuel was mixed with the mass of balls and intensively milled. Reduction in the speed from 22 to 19.2 r.p.m. increased the mill output by 8% and reduced the specific power consumption by 10-12%. Therefore, the optimum speed for mill type 287/470 using wavy armouring of the type described and with a ball load of greater than 10% is 19.2 r.p.m. as illustrated in Fig. 4. This is in good agreement with theoretical calculations. A study was made of the separation of material returned to the ball mill. It was found that the material returned contained a large proportion of finished dust because the

Card 3/8

Improving the efficiency of drum-type ball mills.
(Cont.)

96-7-6/25

centrifugal separators used were not efficient enough. For instance, in milling Kizel' coal the return could contain up to 75% of finished dust. Therefore, four designs of separator were installed at power stations of Molotovenergo in 1955-56. These were two separators type CHATM of Molotovenergo (illustrated in Figs. 5 and 6) and two separators of the All-Union Thermotechnical Institut (VTI) illustrated in Fig. 7. In the CHATM separator the separation of particles from the air is based on the action of inertia forces and, therefore, the separation depends on the time during which the suspended particles remain in the separator which in its turn depends on the volume of the separator and the uniformity with which it is filled. Concentration of the flow of dusty air near the walls which impaired the distribution over the volume of the separator and created local high speed flows was the main cause of the carry-over of large particles from the first design of CHATM separator. The fineness of milling was regulated by adjusting the flow of air through the

Card 4/8

Improving the efficiency of drum-type ball mills.
(Cont.)

96-7-6/25

separator. The first CHATM separator was installed in January and the second in March, 1955. Both systems were of the single fan-type with intermediate bunker using mill type 287/470 with a ball load of 20 tons. Dust separators type LKK6 of diameter 3 420 mm were installed on both systems. A formula is given to determine the fineness of milling, another for the efficiency of the separator and one for the quantity of dust produced by the additional separator. Graphs of the quantity and quality of dust delivered by CHATM separators as a function of the speed in the separation chambers are given in Fig. 8. As the air speed is increased the quantity of dust delivered increases because larger particles are carried over. Graphs of the relationship between the output of the first mill and the specific power consumption as functions of the ventilation with and without the CHATM separators in use are given in Fig. 9 and, for the second mill, graphs of the relationships between the output and specific power consumption as functions

Card 5/8

Improving the efficiency of drum-type ball mills.
(Cont.)

96-7-6/25

between the quantity and quality of dust produced by the BTM return separators as functions of the speed in them are shown in Figs. 11 and 12. As the speed in the separator is increased the quantity of dust delivered increases. Both separators deliver dust of good quality but of very different fineness. The fineness is different because of the different ventilating conditions in the mills and because the separator with plane head has an additional separation element. The inclusion of a return separator increased the mill output in one case from 13.5 - 14.1 to 14.8 - 15.5 t/h with 21-22% retained on a No. 88 sieve and in the other case from 14.8 - 15 to 15.6 - 16.4 t/h with 20-21% residue on a No. 88 sieve. The passage of 1 600 m³/hour of air through the return separator reduced the flow of air through the mill which reduced the mill output. The investigation of the BTM separator with a plane head should be continued in dust systems with normal ventilation. There are 11 figures and 4 Slavic references.

Card 7/8

Improving the efficiency of drum-type ball mills.
(Cont.)
96-7-6/25

ASSOCIATION: Molotovenergo.

AVAILABLE:

Card 8/8

GAVRILOV, G.G., inzh.; KUTMAN, B.L., inzh.

SHATI measuring device for fuel consumption. Elek.sta. 28 no.12:11-12
D '57. (MIRA 12:3)

(Coal, Pulverized--Measurement)

AUTHOR: Kutman, B.L., Engineer

36-58-2-3/13

TITLE: Increasing the Efficiency of Mill Fans by
Installing Axial Guide Devices (Povysheniye ekonomichnosti
mel'nichnykh ventilyatorov putem ustanovki osevykh
napravlyayushchikh apparatov)

PERIODICAL: Teploenergetika, 1958, no 2, pp 18 - 23 (USSR)

ABSTRACT: Soviet industry produces only a limited range of fans for ball-mills. Hence, mill fans are frequently underloaded often by as much as 25%. The output is usually restricted by dampers, which leads to very great losses, particularly when there are no intermediate bunkers. Guide-vane equipment of various types is often used to regulate induced- and forced-draught fans. Permenergo decided to develop similar apparatus for mill fans. An experimental model was first made in the laboratory and tests were then conducted under full-scale conditions in power stations. The model is illustrated in Fig.2 and consists of a fan with a runner diameter of 310 mm, the blades of which are bent back, with inlet and outlet ducting and control equipment. Guide vanes are used to give the air-flow a preliminary swirl before it reaches the fan. A formula is derived to evaluate the reduction in power required when a damper is replaced by guide vane. Flat and shaped blades.

Increasing the Efficiency of
Axial Guide Devices

36-58-2-3/23
Mill Fans by Installing

as illustrated in Fig. 3, were tested. The equipment was used to regulate the power consumption of the motor to the air flow when this was regulated by dampers and by guide vanes installed in the two positions shown in Fig. 4. The results of the tests are given in Fig. 5. The respective merits of flat and shaped guide vanes in different positions are discussed at some length. Curves of the relationship between the rate of air flow and the resistance of the guide-vane equipment as functions of the angle between the axis of the duct and the tail of the vane equipment are shown in Fig. 6. The first axial guide-vane equipment was installed on a mill fan in January, 1977, and has now been adopted on all the pulverizing systems of power station no. 6 and on the majority of the systems of the other stations of Permenergo. The guide-vane equipments are remote-controlled from the boiler control board. Results are given of tests on plane-bladed axial guide-vane equipment in the fuel-pulverizing systems of the Thermal Electric Power Stations Nos. 4, 5 and 6. The results of tests on mill fan 2A at the Thermal Electric Power Station No. 5 are given in Fig. 7. This fan, type BN-50/1000, has an output of

Card 2/4

Increasing the Efficiency of
Axial Guide Devices

36-58-1-3/23
Mill Fans by Installing

50 000 m³/hour at a head of 750 mm water. The rotor diameter was reduced from 1 600 to 1 400 mm and a simpler casing was installed. The data given in Fig. 7 show that with a degree of regulation of 0.92 - 0.94, the power consumption is reduced by 9 - 10%, whilst if the ratio is 0.8, the power economy is 18%. Similar results were obtained at other stations. Tables 1 and 2 give mean operating data on the power consumption of mill fans in power stations nos. 5 and 6 before and after installation of the guide-vane equipment. The operational characteristics were very similar to those obtained experimentally. The reduction in power consumption is up to 25%. The results were used to plot, in fig. 9, a relationship between the reduction in fan power consumption and the degree of regulation when dampers are replaced by guide vanes. The results of tests on mill fans when the output is regulated by dampers and by guide vanes are given in fig. 8; considerable economies are claimed. An annual economy of 80 - 120 000 kW is considered possible in individual pulverization systems without intermediate bunkers and with mill fans of an output of 25 - 30 000 m³/hour; and also in fuel-pulverizing systems with intermediate bunkers in which mill fans with an output of 40 - 45 000 m³/hour operate with a

Card 3/4

Increasing the Efficiency of
Axial Guide Devices

96-58-2-3/23
Mill Fans by Installing

degree of regulation of 0.9. Ten months' operating experience with axial guide-vane equipment installed ahead of the mill fans has not revealed excessive wear and it is estimated that blades made of iron 4 - 5 mm thick will operate for 18 - 20 months. The equipment was cheap to make.

There are 9 figures, 2 tables and 2 Russian references.

ASSOCIATION: Permenergo

AVAILABLE: Library of Congress

Card 4/4

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kand.tekhn.nauk

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